Zell, Christopher [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP From:

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A7206BBB71FF41C999629B86CC25C7E4-ZELL, CHRIS]

Sent: 10/4/2018 10:21:23 PM

Hodgkiss, Miranda [/o=ExchangeLabs/ou=Exchange Administrative Group To:

(FYDIBOHF23SPDLT)/cn=Recipients/cn=9d441ddb44ac4ed486058d2c2690b977-Hodgkiss, Miranda]

Subject: FW: Emailing: deschutes fc rev2.xlsx Attachments: Rollback Calc for Nuri Review.xlsx

Correspondence and spreadsheet regarding density target

----Original Message----From: Zell, Christopher

Sent: Thursday, March 23, 2017 2:49 PM To: Mathieu, Nuri (ECY) < NMAT461@ECY.WA.GOV> Subject: RE: Emailing: deschutes_fc_rev2.xlsx

Hi Nuri,

Please see the attached excel document for rollback calcs I ran this afternoon. I lumped seasons and sites but did not include stormwater per spreadsheet comments.

What do you think?

Chris

----Original Message----

From: Mathieu, Nuri (ECY) [mailto:NMAT461@ECY.WA.GOV] Sent: Wednesday, March 22, 2017 9:08 AM
To: Zell, Christopher <zell.christopher@epa.gov>
Cc: Figueroa-Kaminsky, C. (ECY) <cfig461@ECY.WA.GOV>
Subject: RE: Emailing: deschutes_fc_rev2.xlsx

Looks like they didn't calculate rolled back geometric means at all, which is unusual for an ecology bacteria TMDL. You can do it pretty easily by just multiplying the geomean by (1 - part 2% reduction) or geomean x r. For example if the geomean is 75 and the percent reduction is 40% then r = 0.6 and the target geomean = $75 \times (1-0.4) = 45 \text{ cfu}/100\text{mL}$.

----Original Message----

From: Zell, Christopher [mailto:zell.christopher@epa.gov] Sent: Wednesday, March 22, 2017 8:54 AM

To: Mathieu, Nuri (ECY) <NMAT461@ECY.WA.GOV>

Cc: Figueroá-Kaminsky, C. (ECY) <cfig461@ECY.WA.GOV> Subject: RE: Emailing: deschutes_fc_rev2.xlsx

Hi Nuri,

Many thanks for sending this along. Could you help me find which column(s) list the geomeans that were rolled back to achieve part 2 of the criterion? That is, we need the geomean target needed to achieve part 2 of the criterion based on site-specific or waterbody variance. I'll give you a call to discuss.

All hail Nuri the Great!

Best,

Chris

----Original Message----

From: Mathieu, Nuri (ECY) [mailto:NMAT461@ECY.WA.GOV]

Sent: Wednesday, March 22, 2017 8:41 AM
To: Zell, Christopher <zell.christopher@epa.gov>
Cc: Figueroa-Kaminsky, C. (ECY) <cfig461@ECY.WA.GOV>

Subject: Emailing: deschutes_fc_rev2.xlsx

Hi Chris,

It took a bit of digging, but I believe this is the spreadsheet you're after as the spreadsheet 'rpt tabs' appears to match the tables in the report. It appears that they did calculate an annual geomean from all samples, which is located in the 'new calcs' worksheet.

Good luck!

Nuri Mathieu -- Water Quality Scientist Environmental Assessment Program WA Department of Ecology 360.407.7359